



APR 1 5 2010

Mr. Martin Lundy Chevron USA, Inc. P.O. Box 1392 Bakersfield, CA 93302

Notice of Preliminary Decision - ATC / Certificate of Conformity

Facility # S-1128 Project # S-1094821

Dear Mr. Lundy:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron USA, Inc. Heavy Oil Western Stationary Source, CA. Chevron is lowering SOx and NOx limits, adding flue gas recirculation (FGR) and low NOx burners as necessary on 20 steam generators to comply with Rule 4320.

After addressing all comments made during the 30-day public notice and the 45day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner

Director of Permit Services

DW: RR/cm

Enclosures

Seved Sadredin

Executive Director/Air Pollution Control Officer





APR 1 5 2010

Gerardo C. Rios, Chief Permits Office Air Division U.S. EPA - Region IX 75 Hawthorne St. San Francisco, CA 94105

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity

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Facility # S-1128 Project # S-1094821

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Chevron USA, Inc. Heavy Oil Western Stationary Source, CA, which has been issued a Title V permit. Chevron USA, Inc. is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Chevron is lowering SOx and NOx limits, adding flue gas recirculation (FGR) and low NOx burners as necessary on 20 steam generators to comply with Rule 4320.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1128-6-17 & 38 others with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-

Thank you for your cooperation in this matter.

Sincerely,

David Warner

Director of Permit Services

DW: RR/cm

Enclosures

Seved Sadredin

Executive Director/Air Pollution Control Officer





APR 1 5 2010

Mike Tollstrup, Chief **Project Assessment Branch** Air Resources Board P O Box 2815 Sacramento, CA 95812-2815

Re:

Notice of Preliminary Decision - ATC / Certificate of Conformity

Facility # S-1128 Project # S-1094821

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron USA, Inc. Heavy Oil Western Stationary Source, CA. Chevron is lowering SOx and NOx limits, adding flue gas recirculation (FGR) and low NOx burners as necessary on 20 steam generators to comply with Rule 4320.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leónard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely.

David Warner:

Director of Permit Services

DW: RR/cm

Enclosures

Seved Sadredin

Executive Director/Air Pollution Control Officer

Southern Region

NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF AUTHORITY TO CONSTRUCT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of Authority To Construct to Chevron USA, Inc. for its heavy oil facility in the Heavy Oil Western Stationary Source, California. Chevron is lowering SOx and NOx limits, adding flue gas recirculation (FGR) and low NOx burners as necessary on 20 steam generators to comply with Rule 4320.

The analysis of the regulatory basis for these proposed actions, Project #S-1094821, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

San Joaquin Valley Air Pollution Control District Authority to Construct

Modify Steam Generators for Rule 4320 Compliance

Facility Name: Chevron USA, Inc.

Date: April 12, 2010

Mailing Address: P.O. Box 1392

Engineer: Robert Rinaldi

Bakersfield, CA 93302

Lead Engineer: Richard Karrs Amuk

Contact Person: Martin Lundy

Telephone: 661-654-7142

Fax: 661-654-7004

Application #'s: S-1128-6-17 & 38 others

Project #'s: S-1094821

Deemed Complete: October 7, 2009

I. PROPOSAL

Chevron USA, Inc. (CUSA) requests an Authority to Construct (ATC) for the modification of 20 steam generators permitted in the heavy oil western stationary source. The applicant is proposing to:

- To lower NOx emission to 12 ppmv @ 3% O₂ utilizing existing burners on some units and adding low NOx burners and/or flue gas recirculation (FGR) to other units to meet the 12 ppmv @ 3% O₂. This option is only available to units that are burning fuel that contains less than 50% by volume PUC quality gas and the remainder being waste field gas. Permit conditions will be placed on the ATC's to ensure that compliance with the less than 50% by volume PUC quality gas requirement will be enforced. The applicant is also proposing a 9 ppmv @ 3% O₂ limit when burning fuel that contains greater than 50% by volume PUC quality gas.
- Limit fuel gas sulfur content to ≤ 5 gr-S/100 scf or operate existing scrubber control system to reduce SO₂ emissions by at least 95% by wt. (existing requirement) or limit SO₂ emissions to 9 ppmv @ 3% O₂ (new requirement for Rule 4320).
- restate the SOx limit from 1.0 gr S/100 scf to the equivalent PUC quality limit of 0.00285 lb/MMBtu

These modifications are proposed to occur to some or all 20 units all to comply with District Rule 4320, *Boilers, Steam Generators, and Process Heaters – Phase 3.*

CUSA intends to comply with the NO_x requirements of Rule 4320 by paying annual emission fees as allowed in Rule 4320 section 5.1.2 and is requesting these proposed ATCs as an optional form of compliance.

There will not be an increase in potential emissions of any pollutant as a result of this project. Installation of low NOx burners and FGR is proposed solely to comply with District Rule 4320 requirements. Since there are changes to some of the units' methods of operation, the subject changes are modifications pursuant to District Rule 2201, New and Modified Stationary Source Review Rule.

In addition, the facility currently utilizes Alternate Monitoring Scheme "A" using a portable analyzer, according to District Policy SSP-1105. The applicant is not requesting to change the current monitoring arrangement.

Chevron USA, Inc. received their Title V Permit for facility S-1128 on April 25, 2001. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Chevron USA, Inc. must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. APPLICABLE RULES

Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)

Rule 2520 Federally Mandated Operating Permits (6/21/01)

Rule 4001 New Source Performance Standards (4/14/99)

Rule 4101 Visible Emissions (2/17/05)

Rule 4102 Nuisance (12/17/92)

Rule 4201 Particulate Matter Concentration (12/17/92)

Rule 4301 Fuel Burning Equipment (12/17/92)

Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)

Rule 4305 Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)

Rule 4306 Boilers, Steam Generators and Process Heaters – Phase III (10/16/08)

Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)

Rule 4405 Oxides of Nitrogen Emissions from Existing Steam Generators Used In Thermally Enhanced Oil Recovery -Central And Western Kern County Fields (12/17/92)

Rule 4406 Sulfur Compounds From Oil-Field Steam Generators – Kern County (12/17/92)

Rule 4801 Sulfur Compounds (12/17/92)

CH&SC 41700 Health Risk Assessment

CH&SC 42301.6 School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

II. PROJECT LOCATION

The steam generators are permitted to operate in the heavy oil western stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION

Chevron operates permitted equipment within their Heavy Oil Western stationary source, utilized for the thermally enhanced production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce viscosity of the crude oil, thereby facilitating thermally enhanced oil production.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

The pre-project equipment descriptions (from base documents identified by the applicant) are included in Appendix A.

Proposed Modification:

S-1128-6-17:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE ULTRA-LOW NOX BURNER AND SO2 SCRUBBER (CUSA ID #50-1-26C, DIS #43011-74): INSTALL FLUE GAS RECIRCULATION (FGR), LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2, ALL FOR RULE 4320 COMPLIANCE

S-1128-6-18:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH SO2 SCRUBBER (CUSA ID #50-1-26C, DIS #43011-74): INSTALL NORTH AMERICAN GLE ULTRA-LOW NOX BURNER (FOR RULE 4306), LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2, ALL FOR RULE 4320 COMPLIANCE

S-1128-11-18:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER AND SO2 SCRUBBER (CUSA ID #50-2-26C, DIS #43015-78): INSTALL FLUE GAS RECIRCULATION (FGR), LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-11-19:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER AND SO2 SCRUBBER (CUSA ID #50-2-26C, DIS #43015-78: LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-14-8:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-1) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION (FGR), LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-14-9:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-1) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-15-37:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-1-2F (DIS# 43002-81) WITH SO2 SCRUBBER AND NORTH AMERICAN GLE MAGNA-FLAME ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION (FGR), LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU), LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-15-38:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-1-2F (DIS# 43002-81) WITH SO2 SCRUBBER AND NORTH AMERICAN GLE MAGNA-FLAME ULTRA-LOW NOX BURNER: LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-16-27:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 LOW NOX BURNER AND FGR (#50-2 DIS #43003-81): LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) FOR RULE 4320 COMPLIANCE

S-1128-17-30:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#50-3 DIS #43004-81) WITH FGR AND NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) FOR RULE 4320 COMPLIANCE

S-1128-18-34:

MODIFICATION OF 62.5 MMBTU/HR NATURAL/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-4-2F WITH SO2 SCRUBBER AND NORTH AMERICAN GLE MAGNA-FLAME ULTRA-LOW NOX BURNER AND FGR - TAFT (GROUP II): LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU), LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% ACROSS EXHAUST SCRUBBER OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-18-35:

MODIFICATION OF 62.5 MMBTU/HR NATURAL/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-4-2F WITH SO2 SCRUBBER AND NORTH AMERICAN GLE MAGNA-FLAME ULTRA-LOW NOX BURNER AND FGR - TAFT (GROUP II): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR S/100 DSCF OR REDUCE SOX BY 95% ACROSS EXHAUST SCRUBBER OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-19-27:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#50-5 DIS #43006-81) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR): LOWER NOX LIMIT TO 9 PPMV @ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) FOR RULE 4320 COMPLIANCE

S-1128-36-25:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA-FLAME GLE ULTRA-LOW NOX BURNER AND WITH DEDICATED SO2 SCRUBBER AND FLUE GAS RECIRCULATION (CUSA ID #50-3-26C): LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU), REDUCE SOX BY 95% BY WEIGHT BY SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-36-26:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA-FLAME GLE ULTRA-LOW NOX BURNER AND WITH DEDICATED SO2 SCRUBBER AND FLUE GAS RECIRCULATION (CUSA ID #50-3-26C): REDUCE SOX BY 95% BY WEIGHT VIA SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-44-8:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-3) WITH NORTH AMERICAN GLE MAGNA-FLAME ULTRA LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-44-9:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-3): INSTALL NORTH AMERICAN GLE MAGNA-FLAME ULTRA LOW NOX BURNER: RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-45-10:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-4) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-45-11:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-4) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU FOR RULE 4320 COMPLIANCE

S-1128-47-8:

MODIFICATION OF 25.2 MMBTU/HR STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-47-9:

MODIFICATION OF 25.2 MMBTU/HR STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU FOR RULE 4320 COMPLIANCE

S-1128-48-28:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID# 50-4-26C) EQUIPPED WITH A NORTH AMERICAN MAGNAFLAME GLE ULTRA-LOW NOX BURNER WITH SO2 SCRUBBER AND FLUE GAS RECIRCULATION: LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-48-29:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID# 50-4-26C) EQUIPPED WITH A NORTH AMERICAN MAGNAFLAME GLE ULTRA-LOW NOX BURNER WITH SO2 SCRUBBER AND FLUE GAS RECIRCULATION: REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-56-18:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA-LOW NOX BURNER AND SO2 SCRUBBER (CUSA ID# 50-5-26C, DIS# 43303-80): INSTALL FLUE GAS RECIRCULATION AND LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND LIMIT FUEL GAS TO NO MORE THAN 5 GR S/100 SCF OR REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-56-19:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA-LOW NOX BURNER AND SO2 SCRUBBER (CUSA ID# 50-5-26C, DIS# 43303-80): LIMIT FUEL GAS TO NO MORE THAN 5 GR S/100 SCF OR REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-57-18:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 LOW NOX BURNER AND FGR (#50-6 DIS #43012-81): LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND LIMIT FUEL GAS TO NO MORE THAN 5 GR S/100 SCF OR REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

<u>S-1</u>128-57-19:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 LOW NOX BURNER AND FGR (#50-6 DIS #43012-81): LIMIT FUEL GAS TO NO MORE THAN 5 GR S/100 SCF OR REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-58-18:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-7 DIS# 43013-81 WITH NORTH AMERICAN GLE ULTRA-LOW NOX BURNER AND FGR: LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND LIMIT FUEL GAS TO NO MORE THAN 5 GR S/100 SCF OR REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-58-19:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-7 DIS# 43013-81 WITH NORTH AMERICAN GLE ULTRA-LOW NOX BURNER AND FGR: LIMIT FUEL GAS TO NO MORE THAN 5 GR S/100 SCF OR REDUCE SOX EMISSIONS BY AT LEAST 95% OR LIMIT EXHAUST SO2 EMISSIONS TO 9 PPMV @ 3% O2 ALL FOR RULE 4320 COMPLIANCE

S-1128-61-10:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-2) WITH NORTH AMERICAN GLE MAGNA-FLAME ULTRA LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-61-11:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-2) WITH NORTH AMERICAN GLE MAGNA-FLAME ULTRA LOW NOX BURNER: RESTATE SOX LIMIT EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-335-9:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-6) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-335-10:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-6) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU FOR RULE 4320 COMPLIANCE

S-1128-336-9:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-7) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-336-10:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-7) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-337-13:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#22-5-26C) WITH NORTH AMERICAN GLE MAGNA-FLAME ULTRA LOW NOX BURNER: INSTALL FLUE GAS RECIRCULATION, LOWER NOX LIMIT TO 9 PPMV@ 3% O2 (0.011 LB/MM BTU) OR 12 PPMV @ 3% O2 (0.014 LB/MM BTU) AND RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU ALL FOR RULE 4320 COMPLIANCE

S-1128-337-14:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#22-5-26C) WITH NORTH AMERICAN GLE MAGNA-FLAME ULTRA LOW NOX BURNER: RESTATE SOX LIMITS EXPRESSED AS 0.75 GR S/100 SCF TO 0.00285 LB/MMBTU FOR RULE 4320 COMPLIANCE

Post Project Equipment Description:

The post-project equipment description will include only one of the above options. The appropriate equipment will be listed in each of the PTOs.

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The use of flue gas re-circulation (FGR) can reduce nitrogen oxides (NO_X) emissions by 60% to 70%. In an FGR system, a portion of the flue gas is re-circulated back to the inlet air. As flue gas is composed mainly of nitrogen and the products of combustion, it is much lower in oxygen than the inlet air and contains virtually no combustible hydrocarbons to burn. Thus, flue gas is practically inert. The addition of an inert mass of gas to the combustion reaction serves to absorb heat without producing heat, thereby lowering the flame temperature. Since thermal NO_X is formed by high flame temperatures, the lower flame temperatures produced by FGR serve to reduce thermal NO_X . See Attachment D for a diagram of the proposed FGR configuration.

Low- NO_X burners reduce NO_X formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low- NO_X burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_X . In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized. See Attachment D for low NO_X burner description and specifications.

The SO₂ scrubber uses a caustic liquid (sorbent) for the absorption of sulfur compounds in the exhaust stream. The sulfur in the exhaust stream is captured and converted chemically to a sodium bisulfite compound. Sulfur dioxide is absorbed into a sodium sulfite solution. The reaction forms sodium bisulfite, which is converted back to sodium sulfite by the addition of a calcium precipitating agent. The precipitated calcium compounds are then filtered from solution and disposed of as slurry/sludge. The stoichiometry of the reaction follows:

Absorption:

sodium sulfite + sulfur dioxide + water = sodium bisulfite

 $Na_2SO_3 + SO_2 + H_2O = 2NaHSO_3$

Regeneration:

sodium bisulfite + calcium hydroxide (limestone) = sodium sulfite + calcium sludge

 $2NaHSO_3 + Ca(OH)_2 = Na_2SO_3 + CaSO_3(1/2H_2O) + 3/2H_2O$

A scrubber diagram is provided in **Attachment D**.

VII. GENERAL CALCULATIONS

A. Assumptions

- The maximum operating schedule is 24 hours per day
- The units may be fired on natural gas and recovered vapor
- Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- Rated capacities 62.5 MMBtu/hr, 25.2 MMBtu/hr and 27.5 MMBtu/hr.
- There will not be a decrease in the SOx emission rate for each unit from setting the fuel sulfur gas content to ≤ 5 gr-s/100 scf or operating a control system that reduces SO₂ emissions by at least 95% by wt. or by lowering the scrubber outlet from 30 to 9 ppmv @ 3% O₂, because any one of the SOx control options may be used and the limit with the highest emissions (reducing SO₂ emissions by at least 95% by wt) has the highest potential to emit. Also, the applicant is only proposing to include the scrubber performance requirements of Rule 4320 and is not proposing to lower the Lb-SO₂/MMBtu limits.
- Maximum daily NOx and CO emissions will be kept at their current levels. These
 levels allow for higher emissions during one or more periods of startup/shutdown
 on any given day and are considered to represent worst case emissions.

B. Emission Factors

Pre-Project Emission Factors (EF1)

Pollutant	Pre-Project Emiss	Source	
NO _x	0.0182 lb-NO _x /MMBtu	All Current Permits or ATCs	
SO _x		1.0 gr S/100 scf	Current Permit or ATC

Post-Project Emission Factors (EF2)

Pollutant	Post-Project Emis	Source	
NO _X	0.014 lb-NO _x /MMBtu	Rule 4320 limit	
SO _x	0.00285 lb-SO _X /MMBtu		Proposed and APR 1720

The below calculation demonstrates that 1.0 gr S/100 scf (pre-project) is equivalent to 0.00285 lb-SOX/MMBtu (post-project). Therefore there will be no change in SOx emissions.

$$\left(\frac{64 lb - SO_x}{32 lb - S}\right) \frac{1 gr - S}{100 dscf} \left(\frac{1 lb}{7,000 gr}\right) \frac{dscf}{1,000 Btu} \left(\frac{10^6 Btu}{MMBtu}\right) = 0.00285 \frac{lb - SO_x}{MMBtu}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The PE1 for each pollutant is calculated with the following equation:

■ PE1 = EF (lb/MMBtu) × Heat Input (MMBtu/hr) × Op. Sched. (hr/day or hr/year)

For Permit Units with a 62.5 MMBtu/hr rating:

Ī		Daily PE1		
Pollutant	EF1	Heat Input	Operating Schedule	Daily DE1 (lb/day)
	(lb/MMBtu)	(MMBtu/hr)	(hr/day)	Daily PET (lb/day)
NO _X	0.018	62.5	24	27.3
				•
			Annual PE1	
Pollutant	EF1		Annual PE1 Operating Schedule	Annual PE1
Pollutant	EF1 (Ib/MMBtu)			Annual PE1 (lb/year)

For Permit Units with a 27.5 MMBtu/hr rating:

		Daily PE1	, <u></u>	
Pollutant	EF1	Heat Input	Operating Schedule	Doily DE1 (lb/doy)
	(lb/MMBtu)	(MMBtu/hr)	(hr/day)	Daily PET (ID/day)
NO _X	0.018	27.5	24	12.0
			_	
			Annual PE1	
Pollutant	EF1		Annual PE1 Operating Schedule	Annual PE1
Pollutant	EF1 (lb/MMBtu)			Annual PE1 (lb/year)

For Permit Units with a 25.2 MMBtu/hr rating:

			Daily PE1	
Pollutant	EF1	Heat Input	Operating Schedule	Doily DE1 (lb/doy)
	(lb/MMBtu)	(MMBtu/hr)	(hr/day)	Daily PET (ID/day)
NO _X	0.018	25.2	24	11.0

	Annual PE1			
Pollutant	EF1	Heat Input	Operating Schedule	Annual PE1
	(lb/MMBtu)	(MMBtu/hr)	(hr/year)	(lb/year)
NO _X	0.018	25.2	8,760	4,018

2. Post-Project Potential to Emit (PE2)

The PE2 for each pollutant is calculated with the following equation:

■ PE2 = EF (lb/MMBtu) × Heat Input (MMBtu/hr) × Op. Sched. (hr/day or hr/year)

For Permit Units with a 62.5 MMBtu/hr rating:

		•••	Daily PE2	
Pollutant	EF1	Heat Input	Operating Schedule	Doily DE1 (lb/doy)
-	(lb/MMBtu)	(MMBtu/hr)	(hr/day)	Daily PET (ID/day)
NO _x	0.014	62.5	24	21.0

	Annual PE2			
Pollutant	EF1	Heat Input	Operating Schedule	Annual PE1
2.5	(lb/MMBtu)	(MMBtu/hr)	(hr/year)	(lb/year)
NO _X	0.014	62.5	8,760	7,665

For Permit Units with a 27.5 MMBtu/hr rating:

	· · · ·	.,	Daily PE2	
Pollutant	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO _X	0.014	27.5	24	9.2
			Annual PE2	
Pollutant	EF1	Heat Input	Operating Schedule	Annual PE1
	(lb/MMBtu)	(MMBtu/hr)	(hr/year)	(lb/year)
NO _x	0.014	27.5	8,760	3,373

For Permit Units with a 25.2 MMBtu/hr rating:

Pollutant	EF1		Operating Schedule	Daily PE1 (lb/day)	
	(lb/MMBtu)	(MMBtu/hr)	(hr/day)		
NO _X	0.014	25.2	24	8.5	
	Annual PE2				
			Annual PE2		
Pollutant	EF1	Heat Input	Annual PE2 Operating Schedule	Annual PE1	
Pollutant	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)		Annual PE1 (lb/year)	

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

SSPE1 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- · An offset threshold will be surpassed, or
- A Stationary Source Increase in Permitted Emissions (SSIPE) public notice is triggered

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project; therefore, SSPE1 calculations are not necessary.

4. Post-Project Stationary Source Potential to Emit (SSPE2)

SSPE2 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- An SSIPE public notice is triggered

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project. The potential to emit NOx will decrease in accordance with District Rule 4320. SOx potential to emit will remain unchanged. Therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a major source is a stationary source a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

This source is an existing Major Source for all pollutants and will remain so. No change in Major Source status is proposed or expected as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. This project is exempt from offsets pursuant to Rule 2201, Section 4.6.8 as the modification is being made solely to comply with Rule 4320. Therefore, BE calculations are not required.

7. Major Modification

This facility is an existing major source for all air contaminants. District Rule 2201 references the definition of major modification provided in 40 CFR 51.165 (v)(A) in effect on December 19, 2002, where major modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Significant is defined under Part 51.165(x) as a net emissions increase in the potential of a source to emit any affected pollutant equal to or exceeding any applicable thresholds. For existing major sources in the San Joaquin Valley Air Basin, which is non-attainment for Ozone and PM10, a major modification occurs if the Net Emissions Increases (NEI) is equal to or greater than one or more of the following threshold values when calculated on actual to PE basis:

Major Modification Thresholds (Existing Major Source)					
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?		
NO _x	>50,000 ¹	50,000	Yes		
SO _x	>80,000 ¹	80,000	Yes		
PM ₁₀	>30,000 ¹	30,000	Yes		
VOC	>50,000 ¹	50,000	Yes		

Therefore, this project is a major modification and public notice is required.

Due to the large number of affected units proposed by CUSA for facilities S-1128, S-1129, and S-1141 for Rule 4320 compliance this project in conjunction with others (and condsidering that boilers and steam generators typically have actual emissions below their permitted emission levels) is presumed to cross one or more major modification thresholds.

8. Federal Major Modification

Pursuant to Rule 2201 Section 3.17 to determine if a project is a Federal major modification, the calculation procedure in 40 CFR 51.165(a)(2)(ii) shall be used.

This calculation procedure states that if the sum of the differences between the projected actual emissions and the baseline actual emissions (for existing emission units) or the sum of the potentials to emit (for new emission units) is significant, i.e. greater than the values listed in Rule 2201 Table 3-1, the project is a Federal major modification.

For existing emission units where there is no increase in design capacity the projected actual emissions (PAE) are equal to the emission rate at which the unit is projected to emit in any one year selected by the operator within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity). This projection is made by the operator and must be based on all relevant information, e.g. expected business activity.

For emission units (other than electric utility steam generating units) the baseline actual emissions (BAE) are calculated based on any 24 month period selected by the operator within the previous 10 year period. These emissions must not include any non-compliant operation

In calculating the emission increase (PAE – BAE), the portion of the emissions after the project that the unit could have actually emitted (during the same period used to determine BAE) that are unrelated to the particular project and emissions due to increased product demand are excluded.

For rule compliance projects, the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for pollutants targeted by the subject rule will be a negative value.

Additionally, it can reasonably be concluded that the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for non-targeted pollutants will be zero as any increase in actual emissions (after the project) would be due to increases in business activity and not due to the modification itself. Such emission increases are excluded when calculating the emission increase.

For the reasons stated above, this rule compliance project will not result in a significant emission increase and therefore is not a Federal major modification.

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

However, BACT shall not be required for the following:

- 4.2.3 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from Best Available Control Technology for all air pollutants, provided all of the following conditions are met:
 - 4.2.3.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
 - 4.2.3.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
 - 4.2.3.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
 - 4.2.3.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_x , or 25 tons per year of VOC, or 15 tons per year of SO_x , or 15 tons per year of PM10, or 50 tons per year of CO.

Since each of the above-listed criteria are met, BACT is not required for any pollutant.

B. Offsets

1. Offset Applicability

The proposed modifications are solely for compliance with Rule 4320, and are exempt from offsets if the following criteria are satisfied. Rule 2201, Section 4.6.8 provides the following exemption from offsets.

Emission offsets shall not be required for the following:

- 4.6.8 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from offset requirements for all air pollutants provided all of the following conditions are met:
 - 4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
 - 4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
 - 4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
 - 4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_x, or 25 tons per year of VOC, or 15 tons per year of SO_x, or 15 tons per year of PM-10, or 50 tons per year of CO.

Since each of the above-listed criteria are met, offsets are not required for any pollutant.

2. Quantity of Offsets Required

As seen above, the project meets the exemption requirements of section 4.6.8 of District Rule 2201; therefore offset calculations are not necessary and offsets are not required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. Any new Major Source, which is a new facility that is also a Major Source,
- b. Major Modifications,
- c. Any new errissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant.
- d. Any project which results in the offset thresholds being surpassed, and/or
- e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

As demonstrated in section VII.C.5 above, the facility is not becoming a Major Source as a result of this project.

b. Major Modification

As demonstrated in VII.C.7, this project constitutes a Major Modification; therefore, public noticing for Major Modification purposes is required.

c. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit exceeding the 100 lb/day limit.

d. Offset Threshold

Public notification is required if the Pre-Project Stationary Source Potential to Emit (SSPE1) is increased from a level below the offset threshold to a level exceeding the emissions offset threshold, for any pollutant.

There is no increase in permitted emissions as a result of this project. Therefore, the SSPE is not increasing with this project and an offset threshold cannot be surpassed as a result of this project. A public notice will not be required for offset threshold purposes.

e. SSIPE > 20,000 lb/year

An SSIPE exceeding 20,000 pounds per year for any one pollutant triggers public notice, where SSIPE = SSPE2 - SSPE1.

There is no increase in permitted emissions as a result of this project. As a result, SSPE is not increasing with this project. Therefore, the SSIPE is zero for all pollutants and public notice will not be required for SSIPE purposes.

2. Public Notice Action

As discussed above, public notice will be required for this project.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The DELs for the unit is based on the use of natural gas as a fuel and will be stated in the form of emission factors as shown:

Representative conditions:

- 21. Emissions from the steam generator shall not exceed any of the following limits: 0.050 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Y
- 22. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 12 ppmvd NOx @ 3% O2 or 0.014 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Y

E. Compliance Assurance

1. Source Testing

This unit is subject to District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr. Source testing requirements, in accordance with District Rules 4305, 4306, and 4320 have been included on the ATC.

2. Monitoring

As required by District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr, this unit is subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305, 4306, and 4320 have been included on the ATC.

3. Recordkeeping

As required by District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr this unit is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules 4305, 4306, and 4320 have been included on the ATC.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

District Rule 2520 Federally Mandated Operating Permits

Chevron USA, Inc. has a Title V permit. The changes authorized by these ATCs constitute a minor modification of their Title V permit. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment prior to operating with the proposed modifications and permit conditions will be listed as follows:

- 1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201]
- 2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520]

District Rule 4001 New Source Performance Standards

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction).

The steam generators listed in this project are subject to this subpart. The applicable monthly fuel use record keeping requirements of section 60.48c(g) will be satisfied by District Rule 4306 and Rule 4320 requirements.

The applicable 2-year record retention requirement of section 60.48c(i) will be subsumed by the District's 5-year record retention requirement.

40 CFR Part 60, Subpart A, section 14, defines the meaning of modification to which the the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: "the addition or use of any system or device whose primary funtion is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial".

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). Since the permittee is retrofitting some of the units with FGR and low NOx burners for compliance with District rules and regulations, the requirements of these sections do not apply to the unit.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity.

A permit condition will be listed on the permit as follows:

• 10. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Therefore, compliance with District Rule 4101 requirements is expected.

District Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

A permit condition will be listed on the permit as follows:

 9. No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

Since the applicant is not proposing an increase in emissions with this project, a health risk assessment is not necessary and no further risk analysis is required.

District Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. The worst case emissions unit will be used for this calculation (S-1703-180-10 @ 0.009 lb-PM₁₀/MMBtu).

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F

PM10 Emission Factor: 0.0076 lb-PM10/MMBtu

Percentage of PM as PM10 in Exhaust: 100% Exhaust Oxygen (O₂) Concentration: 3%

Excess Air Correction to F Factor = $\frac{20.9}{(20.9-3)}$ = 1.17

$$GL = \left(\frac{0.0076 \ lb - PM}{MMBtu} \times \frac{7,000 \ grain}{lb - PM}\right) / \left(\frac{8,578 \ ft^3}{MMBtu} \times 1.17\right)$$

 $GL = 0.005 \ grain/dscf < 0.1 \ grain/dscf$

Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on the permit as follows:

 11. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO_2 , NO_2 , and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μ m in diameter.

District Rule 4301 Limits (lb/hr)				
Pollutant	NO ₂	Total PM	SO ₂	
Permit Units with a 62.5 MMBtu/hr rating (12 Units)	0.88	2.3	20.3	
Permit Units with a 25.2 MMBtu/hr rating (1 Unit)	0.35	0.2	0.7	
Permit Units with a 27.5 MMBtu/hr rating (7 Units)	0.38	0.2	0.8	
Rule Limit (lb/hr)	140	10	200	

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, continued compliance is expected.

District Rule 4304 - Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

Pursuant to District Rules 4305 and 4306, Section 6.3.1, the steam generators are not required to tune since it follows District approved Alternate Monitoring scheme A, where the applicable emission limits are periodically monitored. Therefore, the units are not subject to this rule.

District Rule 4305 Boilers, Steam Generators and Process Heaters - Phase 2

The permit units all have a maximum heat input of greater than 5 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the units are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2.*

In addition, these units are also subject to District Rule 4306, *Boilers, Steam Generators* and *Process Heaters – Phase 3*.

Since the emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy the requirements of District Rule 4305.

District Rule 4306 Boilers, Steam Generators and Process Heaters - Phase 3

The permit units all have a maximum heat input of greater than 5 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, these units are subject to District Rule 4306.

In addition, these units are also subject to *District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr.*

The subject units are currently in compliance with the applicable provisions of this rule. Source testing, monitoring and recordkeeping requirements of Rule 4320 are equal to or more stringent than the requirements of this rule; therefore, continued compliance is expected

District Rule 4320 Advance Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5 MMBtu/hr

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

The permit units all have a maximum heat input of greater than 5 MMBtu/hr.

Section 5.1 NOx Emission Limits

Section 5.1 states that an operator of a unit(s) subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

- 5.1.1 Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
- 5.1.2 Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
- 5.1.3 Comply with the applicable Low-use Unit requirements of Section 5.5.

Section 5.2.1 states that on and after the indicated Compliance Deadline units shall not be operated in a manner which exceeds the applicable NO_x limit specified in Table 1 of this rule.

With a maximum heat input of 30 billion Btu/year for these boilers the applicable emission limit category Section 5.2, Table 1, Category C, from District Rule 4320 is as follows:

Table 1: Rule 4320 NOx Emission Limits			
Category	NOx Limit	Authority to Construct	Compliance Deadline
3. Units firing on less than 50%, by volume, PUC quality gas.	b) Staged Enhanced Schedule Initial Limit 12 ppmv or 0.014 lb/MM Btu;	July 1, 2010	July 1, 2011

As shown above, the 12 ppmvd @ 3% O2 NOx limit proposed for the steam generators in this project is consistent with one of the compliance options allowed by the rule. The source testing and alternative monitoring requirements of the rule are consistent with those in existing Rule 4306 and will be included on the requested Authority to Construct.

Daily emission limiting conditions have been included in section VIII.D. Compliance with section 5.2 is expected.

The permit units currently are permitted to burn natural gas, vapor recovery gas, or a blend of the two gasses. Chevron has determined that these steam generators are fired on a blend of natural gas/waste gas less than 50% PUC quality gas by volume. To comply with Rule 4320, Category C3 Step 2, The following conditions shall be placed on the ATCs to ensure compliance with this requirement:

- Except as provided below, fuel burned in this unit shall not be PUC quality natural
 gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more
 than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic
 feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic
 feet, and at least 80% methane by volume. [District Rule 4320] Y
- Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H2S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Y
- When PUC quality gas is burned, the total gas fired in this unit in any calendar month shall be less than 50% by volume PUC quality natural gas. [District Rule 4320]
- In months where PUC quality gas is burned, the permittee shall maintain records on a calendar month basis of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320]

Section 5.4 Particulate Matter Control Requirements

Section 5.4 states that an operator shall comply with one of several options to limit particulate matter emissions.

The applicant is proposing to comply with sections 5.4.1.2 or 5.4.1.3. which state:

- 5.4.1.2. On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or
- On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall install and properly operate an emission control system that reduces SO2 emissions by at least 95% by weight; or limit exhaust SO2 to less than or equal to 9 ppmv corrected to 3.0% O2.

The following condition will be included in the ATCs:

Add During operation of the SOx scrubber, sulfur compound emissions shall be controlled by at least 95% by weight or stack SO2 shall not exceed 9 ppmvd at stack O2. [District Rule 2201]

Add Exhaust from this steam generator shall be directed to the SOx scrubber authorized herein, except when the steam generator is combusting natural gas with a sulfur content less than or equal to 5.0 gr-S/100 scf. [District Rule 4320]

Section 5.6 Startup and Shutdown Provisions

Section 5.6 states that on and after the full compliance deadline specified in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5.

CUSA has proposed to retain existing start-up and shutdown duration limits of 2 hours and 2 hours, respectively. Emissions during start-up and shutdown will not be subject to the emission limits in Sections 5.2 and 5.2.2. The following conditions will be listed on the ATCs:

- 24. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320]
- 25. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320]

Shakedown Provision

CUSA is requesting approval of a 60-day "shakedown" period for the unit to be retrofitted. The following condition will be included with the ATC.

During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 15 ppmvd @ 3% O2 or 0.0.018 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Y

Section 5.7 Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 shall either install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO_X , CO and O_2 , or implement an APCO-approved alternate monitoring.

Consistent with current permit requirements, CUSA proposes to continue implementing Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_X, CO, and O₂ exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the ATCs to ensure compliance with the requirements of the proposed alternate monitoring plan:

- 34. {4063} The permittee shall monitor and record the stack concentration of NO_x, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- 35. {4064} If either the NO_X or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]
- 36. {4065} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]
- 49. {4066} The permittee shall maintain records of: (1) the date and time of NO_X, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]

Section 5.8 Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu), emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sarnpling).

Therefore, the following condition will be listed on the ATCs as follows:

• 40. {2976} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following permit condition will be listed on the ATCs as follows:

41. {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]

Section 5.8.4 requires that for emissions monitoring pursuant to Sections 5.7.1 and 6.3.1 using a portable NO_X analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period. Therefore, the following previously listed permit condition will be on the ATCs as follows:

• 36. {2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

Section 5.8.5 requires that for emissions source testinbg performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following permit condition will be listed on the permit as follows:

 42. {2980} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

Section 6.1 Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO and EPA upon request. Failure to maintain records or information contained in the records that

demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

A permit condition will be listed on the permit as follows:

• 53. {2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

Section 6.2, Test Methods

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Pollutant	Units	Test Method Required	
NO _x	ppmv	EPA Method 7E or ARB Method 100	
NO _x	lb/MMBtu	EPA Method 19	
co	ppmv	EPA Method 10 or ARB Method 100	
Stack Gas O₂	%	EPA Method 3 or 3A, or ARB Method 100	
Stack Gas Velocities	ft/min	EPA Method 2	
Stack Gas Moisture Content	%	EPA Method 4	

The following permit conditions will be listed on the permit as follows:

- 43{109} Source testing shall be conducted using the methods and procedures approved by the District.
 The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- Add The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) EPA Method 19, CO (ppmv) EPA Method 10 or 10B or ARB Method 100, stack gas oxygen EPA Method 3 or 3Aor ARB Method 100, SOx (lb/MMBtu) ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 4305, 4306 and 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.1 and 5.2.3 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

The following permit conditions will be listed on the ATCs:

 27. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]

- 29. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]
- 30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

In addition, since the applicant has proposed to use pre-approved Alternate Monitoring Scheme "A" using a portable analyzer, the tune-up requirements listed in Section 6.3.1 are not applicable to the boiler. Section 6.3.1 also requires that, during the 36-month source testing interval, the owner/operator shall monthly monitor the operational characteristics recommended by the unit manufacturer. Since the pre-approved Alternate Monitoring Scheme "A" using a portable analyzer requires monthly monitoring of NO_X , CO, and O_2 exhaust emissions concentrations, operational characteristics monitoring requirement is satisfied, and no further discussion is required.

Section 6.4, Emission Control Plan (ECP)

Section 6.4 requires the operator of any unit to submit to APCO for approval an Emissions Control Plan no later than January 1, 2010. CUSA will submit an Emissions Control Plan by January 1, 2010.

Section 7.0, Compliance Schedule

Section 7.0 identifies the dates by which the operator shall submit an application for an ATC and the date by which the owner shall demonstrate compliance with this rule.

The units will be in compliance with the emissions limits listed in Table 1, Section 5.2 of this rule, and periodic monitoring and source testing as required by District Rule 4320. Therefore, requirements of the compliance schedule, as listed in Section 7.0 of District Rule 4320, are satisfied. No further discussion is required.

Conclusion

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule, see attached draft permits in Appendix C. Therefore, compliance with District Rule 4320 requirements is expected.

District Rule 4405 Oxides of Nitrogen Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery – Central and Western Kern County Fields

This rule limits NOx emissions from existing steam generators used in thermally enhanced oil recovery operations prior to August 22, 1986. The steam generators in this project are subject to a NOx limit well below the 0.14 lb/MMBTU limit allowed by this rule for natural gas-fired units. Therefore, continued compliance is expected.

Rule 4406 Sulfur Compounds from Oil-Field Steam Generators – Kern County

This rule limits SOx emissions from existing steam generators used in oil field operations prior to September 12, 1979. Sulfur compound emissions (as S) from the steam generators in this project are limited to an average rate below the 0.11 lb/MMBTU limit for sulfur (as S) allowed by the rule. Continued compliance is expected.

District Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

Volume
$$SO_2 = \frac{n RT}{P}$$

With:

N = moles SO₂
T (Standard Temperature) =
$$60^{\circ}F = 520^{\circ}R$$

P (Standard Pressure) = 14.7 psi
R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot {}^{\circ}R}$

$$\frac{0.00285\,lb - SOx}{MMBtu} \times \frac{MMBtu}{8,578\,dscf} \times \frac{1\,lb \cdot mol}{64\,lb} \times \frac{10.73\,psi \cdot ft^3}{lb \cdot mol \cdot °R} \times \frac{520°R}{14.7\,psi} \times \frac{1,000,000 \cdot parts}{million} = 1.97\,\frac{parts}{million}$$

$$SulfurConcentration = 1.97 \frac{parts}{million} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

This facility is not located within 1,000 feet of a school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct S-1128-6-17 & 38 others subject to the permit conditions on the attached draft Authorities to Construct in Appendix B.

X. BILLING INFORMATION

Annual Permit Fees			
Permit	Fee Schedule	Fee Description	Annual Fee
Permit Units with a 62.5 MMBtu/hr rating (12 Units)	3020-02-H	62.5 MMBtu/hr	\$1,030.00
Permit Units with a 25.2 MMBtu/hr rating (1 Unit)	3020-02-H	25.2 MMBtu/hr	\$1,030.00
Permit Units with a 27.5 MMBtu/hr rating (7 Units)	3020-02-H	27.5 MMBtu/hr	\$1,030.00

Appendices

Current Base Documents

Appendix A: Appendix B: Appendix C: Appendix D: Draft ATCs TVFORM-009

Emission Control Equipment

Appendix A
Current Base Documents





PERMIT NO: S-1128-6-13 ISSUANCE DATE: 05/25/2005

LEGAL OWNER OR OPERATOR: CHEVRON USA INC

MAILING ADDRESS: P O BOX 1392

BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY

SECTION: 26 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH SO2 SCRUBBER (CUSA ID #50-1-26C, DIS #43011-74); RETROFIT THE STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER OR JOHN ZINK COOLFUEL RETROFIT SYSTEM (OR DISTRICT APPROVED EQUIVALENT) TO ACHIEVE 15 PPMVD-NOX @ 3% O2 (0.0182 LB-NOX/MMBTU)(RENEWED ONE TIME-4/2/2007)

CONDITIONS

- This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
- Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
- Permits to Operate (PTOs) S-1128-22, -40, -41, -42, -43, -91, -155, -156, -158, -210, -342, -343, -344, -345, -346, -347, -348, -349, -350, -351, -353, -355, S-1129-57, -80, -82, -380, -381, and -859, S-1141-9, -11, -13, -18, -20, -25, -73, -391, -392, -394, -396, -403, -404, and -499 shall be cancelled not later than the date of initial operation of this modified emissions unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit
- 6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
- 7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. This Authority to Construct shall be implemented according to the date proposed in the District approved Rule 4306 Emission Control Plan. [District Rule 4306, 6.4] Federally Enforceable Through Title V Permit
- 9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 10. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 12. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- 13. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
- 14. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit
- 15. Scrubber liquor pH shall be maintained between 6 and 8 and shall be continuously monitored and recorded during operation of this unit. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 16. Scrubber mist eliminator shall be properly cleaned and maintained per the recommendations of the manufacturer. Each occurrence of the cleaning and maintenance shall be recorded. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 17. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. The scrubber recirculation liquor liquid to gas ratio shall be recorded on a weekly basis. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 18. Testing for vapor recovery gas sulfur content shall be conducted no less than monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Emissions from the steam generator shall not exceed any of the following limits: 0.050 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 20. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 21. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 22. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O2 or 0.036 lb-NOx/MMBtu, 0.050 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit

- 23. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
- 24. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3]
- 25. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
- 26. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 28. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
- 29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 31. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 32. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 33. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 34. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

- 35. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 36. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 37. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 38. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 39. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 40. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
- 41. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 42. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 43. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 44. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 45. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

- 46. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 47. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 48. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 49. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
- 50. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated.

 [District NSR Rule] Federally Enforceable Through Title V Permit
- 51. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 52. Records of the scrubber liquor pH, occurrences of the cleaning and maintenance of the scrubber mist eliminator, and the scrubber liquid-to-gas ratio shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
- 53. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit





PERMIT NO: S-1128-11-14 ISSUANCE DATE: 05/25/2005

LEGAL OWNER OR OPERATOR: CHEVRON USA INC

MAILING ADDRESS: P O BOX 1392

BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY

SECTION: 26 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH SO2 SCRUBBER (CUSA ID #50-2-26C, DIS #43015-78): RETROFIT THE STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER OR JOHN ZINK COOLFUEL RETROFIT SYSTEM (OR DISTRICT APPROVED EQUIVALENT) TO ACHIEVE 15 PPMVD-NOX @ 3% O2 (0.0182 LB-NOX/MMBTU) (RENEWED SECOND TIME-5/20/09)

CONDITIONS

- This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
- Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
- Permits to Operate (PTOs) S-1128-22, -40, -41, -42, -43, -91, -155, -156, -158, -210, -342, -343, -344, -345, -346, -347, -348, -349, -350, -351, -353, -355, S-1129-57, -80, -82, -380, -381, and -859, S-1141-9, -11, -13, -18, -20, -25, -73, -391, -392, -394, -396, -403, -404, and -499 shall be cancelled not later than the date of initial operation of this modified emissions unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit
- 6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. This Authority to Construct shall be implemented according to the date proposed in the District approved Rule 4306 Emission Control Plan. [District Rule 4306, 6.4] Federally Enforceable Through Title V Permit
- 9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 10. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 12. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- 13. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
- 14. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit
- 15. Scrubber liquor pH shall be maintained between 6 and 8 and shall be continuously monitored and recorded during operation of this unit. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 16. Scrubber mist eliminator shall be properly cleaned and maintained per the recommendations of the manufacturer. Each occurrence of the cleaning and maintenance shall be recorded. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 17. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. The scrubber recirculation liquor liquid to gas ratio shall be recorded on a weekly basis. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 18. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the vapor recovery gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
- 19. Permittee shall measure and record the natural gas sulfur content and BTU content at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
- 20. Testing for vapor recovery gas shall be conducted no less than monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 21. Emissions from the steam generator shall not exceed any of the following limits: 0.050 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu, [District Rule 2201] Federally Enforceable Through Title V Permit
- 22. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 23. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O2 or 0.036 lb-NOx/MMBtu, 0.050 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit

- 24. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
- 25. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3]
- 26. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
- 27. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 29. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
- 30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 32. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 33. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the engine shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 34. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 35. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

- 36. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 37. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 38. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 39. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
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- 42. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 43. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 44. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 45. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 46. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

- 47. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 48. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 49. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
- 51. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated. [District NSR Rule] Federally Enforceable Through Title V Permit
- 52. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 53. Records of the scrubber liquor pH, occurrences of the cleaning and maintenance of the scrubber mist eliminator, and the scrubber liquid-to-gas ratio shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
- 54. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit





PERMIT NO: S-1128-14-4 ISSUANCE DATE: 05/25/2005

LEGAL OWNER OR OPERATOR: CHEVRON USA INC

MAILING ADDRESS: P O BOX 1392

BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY

SECTION: 26 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SN 22-1): RETROFIT THE STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER OR JOHN ZINK COOLFUEL RETROFIT SYSTEM (OR DISTRICT APPROVED EQUIVALENT) TO ACHIEVE 15 PPMVD-NOX @ 3% O2 (0.0182 LB-NOX/MMBTU) (RENEWED SECOND TIME - 5/20/09)

CONDITIONS

- This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
- 2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
- 3. Permits to Operate (PTOs) S-1128-22, -40, -41, -42, -43, -91, -155, -156, -158, -210, -342, -343, -344, -345, -346, -347, -348, -349, -350, -351, -353, -355, S-1129-57, -80, -82, -380, -381, and -859, S-1141-9, -11, -13, -18, -20, -25, -73, -391, -392, -394, -396, -403, -404, and -499 shall be cancelled not later than the date of initial operation of this modified emissions unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters.

 [District Rule 2010] Federally Enforceable Through Title V Permit
- 6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. This Authority to Construct shall be implemented according to the date proposed in the District approved Rule 4306 Emission Control Plan. [District Rule 4306, 6.4] Federally Enforceable Through Title V Permit
- 9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 10. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 12. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
- 13. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- 14. Emissions from the steam generator shall not exceed any of the following limits: 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 16. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O2 or 0.036 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 18. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
- 19. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3]
- 20. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
- 21. Emissions from the steam generator shall not exceed either of the following limits: 23.8 lb-NOx/day or 55.4 lb-CO/day. [District Rule 2201] Federally Enforceable Through Title V Permit

- 22. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 23.8 lb-NOx/day, 4,384 lb-NOx/yr, 55.4 lb-CO/day, and 9,034 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 24. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
- 25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 27. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 28. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 29. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 31. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

- 32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 33. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 35. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 36. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
- 37. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 38. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 39. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 40. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 41. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 42. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 43. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

- 44. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 45. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
- 46. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated. [District NSR Rule] Federally Enforceable Through Title V Permit
- 47. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 48. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1128-15-35

SECTION: 02 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-1-2F (DIS# 43002-81)

WITH SO2 SCRUBBER AND NORTH AMERICAN GLE MAGNA-FLAME ULTRA-LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

- All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
- All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
- {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
- Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1]
- The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.3.2, 4301, 5.2.1, 4801] Federally Enforceable Through Title V Permit
- Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.21
- Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
- Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit
- Scrubber liquor pH shall be maintained above 6 and shall be continuously monitored. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 10. Scrubber mist eliminator shall be properly cleaned and maintained per the recommendations of the manufacturer. Each occurrence of the cleaning and maintenance shall be recorded. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS GONTINUE ON NEXT PAGE These terms and conditions part-of the Facility-wide Permit to Operate.

Facility Name: CHEVRON USA INC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN-COUNTY 8-1128-15-35: Apr 15 2010 127PM - RINALDIR

- 11. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. The scrubber recirculation liquor liquid to gas ratio shall be recorded on a weekly basis. [District Rules 2201 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 12. Emissions from the steam generator shall not exceed any of the following limits: 0.324 lb-SOx/MMBtu, 0.050 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
- 14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V **Permit**
- 15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3]
- 16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
- 17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit
- 19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
- 21. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 22. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur precombustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 23. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

are part of the Facility-wide Permit to Operate. These terms and

Facility Name: CHEVRON USA INC HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY

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- 24. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3246, D 4084, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 25. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following I hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1]
- 30. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 31. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 32. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 33. Stack gas velocities for source test purposes shall be determined using EPA Method 2. [District Rule 1081] Federally Enforceable Through Title V Permit
- 34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

REQUIREMENTS CONTINUE ON NEXT PAGE part of the Facility-wide Permit to Operate. These terms and

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Facility Name: CHEVRON USA INC

- 35. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 37. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 38. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
- 39. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
- 40. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
- 41. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
- 42. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
- 43. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District NSR Rule] Federally Enforceable Through Title V Permit
- 44. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 45. Records of the scrubber liquor pH, occurrences of the cleaning and maintenance of the scrubber mist eliminator, and the scrubber liquid-to-gas ratio shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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- 46. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 9.4.2, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit
- 47. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 48. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 49. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 50. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 51. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 52. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR 52, 60 and 61 and all other applicable Federal, State and local regulations. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 53. Permittee shall have installed a hydrocarbon vapor recovery system, having a collection efficiency of 85% on the following: (143) steam drive producing wells designated in this PSD permit, plus (16) existing steam drive producing wells located in Section 16, T30S, R22E, M.D.B. & M. This system shall be installed on existing wells prior to project start-up, and on new or modified wells before venting steam to the atmosphere. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 54. At such times as specified by the USEPA, permittee shall conduct performance tests for HC and furnish the District and the USEPA a written report of the results of such tests. The tests for HC shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 55. Performance tests shall be conducted for each vapor recovery system listed above in the Cymric and Taft areas. The USEPA shall be notified at least 30 days in advance of such test to allow an observer to be present. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 56. Permittee shall not discharge or cause the discharge of VOC into the atmosphere in excess of 50.6 lbs/day for each well in the system. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 57. Permittee shall operate and maintain operable scrubbers on the equipment designated below: (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 2, T11N, R24W; (1) 50 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. Exhaust gases from the above units shall be ducted through operating scrubbers. [PSD SJ 77-32] Federally Enforceate Through Title V Permit

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- 58. Permittee shall not discharge into the atmosphere SO2 in excess of 0.145 lb/MMBtu (maximum 2-hour average) for the steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 59. Permittee shall operate, and maintain operable excess oxygen control equipment on the units designated below: (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. The concentration of excess oxygen in the exhaust gases shall not exceed 3% for the above units on a 24-hour average basis. The excess oxygen level shall be recorded continuously in a permanent record and shall be available for periodic inspection by the USEPA. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 60. Permittee shall not discharge into the atmosphere NOx in excess of 0.50 lb/MMBtu (maximum 2-hour average) for the 50 MMBtu/hr steam generators and 0.57 lb/MMBtu (maximum 2-hour average) for the 22 MMBtu/hr steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 61. At such times as specified by the USEPA, permittee shall conduct performance tests for SO2 and NOx, and furnish the District and the USEPA a written report of the results of such tests. The tests for SO2 and NOx shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 62. The performance tests shall be conduct for the equipment designated below: for SO2 the units designated in condition 57; for NOx the units designated in condition 59. Performance tests for the emissions of SO2 and NOx shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources on the equipment named above. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for an observer to be present and to allow time for development of an approvable performance test plan. Such prior approval will minimize the possibility of USEPA rejection of test results for procedural deficiencies. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 63. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: E-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 77-32] Federally Enforceable Through Title V Permit

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Facility Name: CHEVRON USA INC
Location: HEAVY OIL WESTERN STATIONARY SOURCE
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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1128-16-25 EXPIRATION DATE: 02/28/2006

SECTION: 02 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 LOW NOX BURNER AND FGR (#50-2 DIS #43003-81)

PERMIT UNIT REQUIREMENTS

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] 1.
- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- Flue gas recirculation system shall be operational at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
- All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents, or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
- 7. Emissions from the steam generator shall not exceed any of the following limits: 0.006 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, or 0.011 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6] and 4306, 5.3] Federally Enforceable Through Title V Permit
- 11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

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- 12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 16. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 17. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 18. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CHEVRON USA INC

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- 22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 24. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
- 26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 28. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 29. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 30. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 31. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 32. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2]
- 33. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

- 34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
- 35. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated. [District NSR Rule] Federally Enforceable Through Title V Permit
- 36. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit
- 38. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 39. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 40. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 41. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 42. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 43. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR 52, 60 and 61 and all other applicable Federal, State and local regulations. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 44. Permittee shall have installed a hydrocarbon vapor recovery system, having a collection efficiency of 85% on the following: (143) steam drive producing wells designated in this PSD permit, plus (16) existing steam drive producing wells located in Section 16, T30S, R22E, M.D.B. & M. This system shall be installed on existing wells prior to project start-up, and on new or modified wells before venting steam to the atmosphere. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 45. At such times as specified by the USEPA, permittee shall conduct performance tests for HC and furnish the District and the USEPA a written report of the results of such tests. The tests for HC shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title
- 46. Performance tests shall be conducted for each vapor recovery system listed above in the Cymric and Taft areas. The USEPA shall be notified at least 30 days in advance of such test to allow an observer to be present. [PSD SJ 77-32] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CHEVRON USA INC

HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY Location: HEAVY OIL WE-8-1128-18-25; Apr 15 2010 3:28PM - RINALDIR

- 47. Permittee shall not discharge or cause the discharge of VOC into the atmosphere in excess of 50.6 lbs/day for each well in the system. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 48. Permittee shall operate and maintain operable scrubbers on the equipment designated below: (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. Exhaust gases from the above units shall be ducted through operating scrubbers. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 49. Permittee shall not discharge into the atmosphere SO2 in excess of 0.145 lb/MMBtu (maximum 2-hour average) for the steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 50. Permittee shall operate, and maintain operable excess oxygen control equipment on the units designated below: (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. The concentration of excess oxygen in the exhaust gases shall not exceed 3% for the above units on a 24-hour average basis. The excess oxygen level shall be recorded continuously in a permanent record and shall be available for periodic inspection by the USEPA. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 51. Permittee shall not discharge into the atmosphere NOx in excess of 0.50 lb/MMBtu (maximum 2-hour average) for the 50 MMBtu/hr steam generators and 0.57 lb/MMBtu (maximum 2-hour average) for the 22 MMBtu/hr steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 52. At such times as specified by the USEPA, permittee shall conduct performance tests for SO2 and NOx, and furnish the District and the USEPA a written report of the results of such tests. The tests for SO2 and NOx shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 53. The performance tests shall be conduct for the equipment designated below: for SO2 the units designated in condition 61; for NOx the units designated in condition 63. Performance tests for the emissions of SO2 and NOx shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources on the equipment named above. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for an observer to be present and to allow time for development of an approvable performance test plan. Such prior approval will minimize the possibility of USEPA rejection of test results for procedural deficiencies. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 54. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: E-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 77-32] Federally Enforceable Through Title V Permit





PERMIT NO: S-1128-17-24

ISSUANCE DATE: 05/25/2005

LEGAL OWNER OR OPERATOR: CHEVRON USA INC

MAILING ADDRESS:

P O BOX 1392

BAKERSFIELD, CA 93302

LOCATION:

HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY

SECTION: 02 TOWNSHIP: 11N

RANGE: 24W

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH FGR (#50-3 DIS #43004-81): RETROFIT THE STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER OR JOHN ZINK COOLFUEL RETROFIT SYSTEM (OR DISTRICT APPROVED EQUIVALENT) TO ACHIEVE 15 PPMVD-NOX @ 3% O2 (0.0182 LB-NOX/MMBTU) (RENEWED SECOND TIME -5/20/09)

CONDITIONS

- This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
- Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
- Permits to Operate (PTOs) S-1128-22, -40, -41, -42, -43, -91, -155, -156, -158, -210, -342, -343, -344, -345, -346, -347, -348, -349, -350, -351, -353, -355, S-1129-57, -80, -82, -380, -381, and -859, S-1141-9, -11, -13, -18, -20, -25, -73, -391, -392, -394, -396, -403, -404, and -499 shall be cancelled not later than the date of initial operation of this modified emissions unit. [District Rule 2201] Federally Enforceable Through Title V Permit
- The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seved Sadredin, Executive Director / APCO

- 5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters.

 [District Rule 2010] Federally Enforceable Through Title V Permit
- 6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
- 7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. This Authority to Construct shall be implemented according to the date proposed in the District approved Rule 4306 Emission Control Plan. [District Rule 4306, 6.4] Federally Enforceable Through Title V Permit
- 9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 10. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 11. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 12. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- 13. Emissions from the steam generator shall not exceed any of the following limits: 0.006 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, or 0.011 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 15. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O2 or 0.036 lb-NOx/MMBtu, 0.006 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu, or 0.011 lb-VOC/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 17. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
- 18. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3]
- 19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
- 20. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

- 21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 23. Whenever the flue gas recirculation (FGR) system on this unit is switched from the open to the closed position, or from the closed to the open position, compliance source testing for NOx and CO emissions shall be conducted within 60 days of change of FGR operation date unless source testing with FGR system in both the open and closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit
- 24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 25. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 26. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 27. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition.

 [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

- 31. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 32. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 33. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
- 35. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 37. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 38. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 39. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 40. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 41. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 42. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

- 43. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
- 44. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated. [District NSR Rule] Federally Enforceable Through Title V Permit
- 45. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 46. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit
- 47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 48. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 49. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 50. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 51. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

 [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 52. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR 52, 60 and 61 and all other applicable Federal, State and local regulations. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 53. Permittee shall have installed a hydrocarbon vapor recovery system, having a collection efficiency of 85% on the following: (143) steam drive producing wells designated in this PSD permit, plus (16) existing steam drive producing wells located in Section 16, T30S, R22E, M.D.B. & M. This system shall be installed on existing wells prior to project start-up, and on new or modified wells before venting steam to the atmosphere. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 54. At such times as specified by the USEPA, permittee shall conduct performance tests for HC and furnish the District and the USEPA a written report of the results of such tests. The tests for HC shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 55. Performance tests shall be conducted for each vapor recovery system listed above in the Cymric and Taft areas. The USEPA shall be notified at least 30 days in advance of such test to allow an observer to be present. [PSD SJ 77-32] Federally Enforceable Through Title V Permit

- 56. Permittee shall not discharge or cause the discharge of VOC into the atmosphere in excess of 50.6 lbs/day for each well in the system. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 57. Permittee shall operate and maintain operable scrubbers on the equipment designated below: (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. Exhaust gases from the above units shall be ducted through operating scrubbers. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 58. Permittee shall not discharge into the atmosphere SO2 in excess of 0.145 lb/MMBtu (maximum 2-hour average) for the steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 59. Permittee shall operate, and maintain operable excess oxygen control equipment on the units designated below: (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. The concentration of excess oxygen in the exhaust gases shall not exceed 3% for the above units on a 24-hour average basis. The excess oxygen level shall be recorded continuously in a permanent record and shall be available for periodic inspection by the USEPA. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 60. Permittee shall not discharge into the atmosphere NOx in excess of 0.50 lb/MMBtu (maximum 2-hour average) for the 50 MMBtu/hr steam generators and 0.57 lb/MMBtu (maximum 2-hour average) for the 22 MMBtu/hr steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 61. At such times as specified by the USEPA, permittee shall conduct performance tests for SO2 and NOx, and furnish the District and the USEPA a written report of the results of such tests. The tests for SO2 and NOx shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 62. The performance tests shall be conduct for the equipment designated below: for SO2 the units designated in condition 60; for NOx the units designated in condition 62. Performance tests for the emissions of SO2 and NOx shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources on the equipment named above. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for an observer to be present and to allow time for development of an approvable performance test plan. Such prior approval will minimize the possibility of USEPA rejection of test results for procedural deficiencies. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 63. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: E-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 77-32] Federally Enforceable Through Title V Permit





ISSUANCE DATE: 02/21/2007

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1128-18-32

LEGAL OWNER OR OPERATOR: CHEVRON USA INC **MAILING ADDRESS:** P O BOX 1392

BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY

SECTION: 02 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #50-4-2F WITH SO2 SCRUBBER AND NORTH AMERICAN GLE MAGNA-FLAME ULTRA-LOW NOX BURNER - TAFT (GROUP II): ALLOW UNSCRUBBED VAPORS OR VAPORS FROM H2S SCAVENGING SYSTEM LISTED ON PERMIT S-1128-617 TO BE DIRECTLY INJECTED INTO BURNER, BURNER RING, OR NATURAL GAS FUEL LINE CONNECTED TO THE BURNER

CONDITIONS

- The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
- Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter and TEOR gas volume flowmeter. [District Rules 2201, 4305,5.4, and 4306, 5.4] Federally Enforceable Through Title V
- 3. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
- If installed, low pressure fuel induced recirculation system shall be operated at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
- Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

- 7. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit
- 8. Scrubber liquor pH shall be maintained above 6, and shall be continuously monitored. [District NSR Rule] Federally Enforceable Through Title V Permit
- 9. Scrubber mist eliminator shall be properly cleaned and maintained. [District NSR Rule] Federally Enforceable Through Title V Permit
- 10. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. [District NSR Rule] Federally Enforceable Through Title V Permit
- 11. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit
- 12. Emission rates shall not exceed any of the following: SOX (as SO2): 0.324 lb/MMBtu; PM10: 0.050 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
- 13. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 50 ppmvd @ 3% O2. [District Rules 2201, 2520, 9.3.2, 4201, 3.1, 4301, 5.2, 5.3, and 5.5, 4305 and 4306] Federally Enforceable Through Title V Permit
- 14. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
- 15. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54 lb-NOx/day, 9,855 lb-NOx/yr, 55.5 lb-CO/day, and 20,258 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
- 17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit
- 18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
- 19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

- 20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
- 21. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 22. Compliance with the sulfur emission limit requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
- 23. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 24. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 25. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 26. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
- 27. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.3.2 and 4801] Federally Enforceable Through Title V Permit
- 28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
- 29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

- 30. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2520. 9.3.2, 4305 and 4306] Federally Enforceable Through Title V Permit
- 31. Compliance demonstration (source testing) shall be conducted by independent testing laboratories and shall be witnessed, or authorized by the District. Sample collection shall be done by ARB certified testing laboratory. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
- 34. The following conditions must be met for representative units to be used to test for NOx and CO emissions for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of heat input, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 35. All units in a group for which representative units are annually source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative units. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 36. An operating log shall be maintained for each unit of the group. The log shall include, on a monthly basis, the total hours of operation, type and quantity of fuel used, and preventative and corrective maintenance and modifications performed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 37. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated such that in three years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 38. Should any of the representative units exceed the required emission limits of this permit, each of the unit in the group shall conduct emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 39. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.4.2; 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
- 40. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 41. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) EPA Method 19, CO (ppmv) EPA Method 10 or ARB Method 100, SOx (lb/MMBtu) EPA Method 6 or ARB Method 100 and EPA Method 19, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, stack gas velocities EPA Method 2, and stack gas moisture content EPA Method 4. [District Rules 1081, 4305] Federally Enforceable Through Title V Permit
- 42. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District NSR Rule] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

- 44. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 45. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 46. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 47. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 48. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 49. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR 52, 60 and 61 and all other applicable Federal, State and local regulations. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 50. Permittee shall have installed a hydrocarbon vapor recovery system, having a collection efficiency of 85% on the following: (143) steam drive producing wells designated in this PSD permit, plus (16) existing steam drive producing wells located in Section 16, T30S, R22E, M.D.B. & M. This system shall be installed on existing wells prior to project start-up, and on new or modified wells before venting steam to the atmosphere. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 51. At such times as specified by the USEPA, permittee shall conduct performance tests for HC and furnish the District and the USEPA a written report of the results of such tests. The tests for HC shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 52. Performance tests shall be conducted for each vapor recovery system listed above in the Cymric and Taft areas. The USEPA shall be notified at least 30 days in advance of such test to allow an observer to be present. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 53. Permittee shall not discharge or cause the discharge of VOC into the atmosphere in excess of 50.6 lbs/day for each well in the system. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 54. Permittee shall operate and maintain operable scrubbers on the equipment designated below: (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 2, T11N, R24W; (1) 50 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. Exhaust gases from the above units shall be ducted through operating scrubbers. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 55. Permittee shall not discharge into the atmosphere SO2 in excess of 0.145 lb/MMBtu (maximum 2-hour average) for the steam generators designated in the previous condition. Performance tests of these units for SO2 shall be conducted as described below. [PSD SJ 77-32] Federally Enforceable Through Title V Permit

- 56. Permittee shall operate, and maintain operable excess oxygen control equipment on the units designated below: (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. The concentration of excess oxygen in the exhaust gases shall not exceed 3% for the above units on a 24-hour average basis. The excess oxygen level shall be recorded continuously in a permanent record and shall be available for periodic inspection by the USEPA. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 57. Permittee shall not discharge into the atmosphere NOx in excess of 0.50 lb/MMBtu (maximum 2-hour average) for the 50 MMBtu/hr steam generators and 0.57 lb/MMBtu (maximum 2-hour average) for the 22 MMBtu/hr steam generators designated in the previous condition. Performance tests of these units for NOx shall be conducted as described below. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 58. At such times as specified by the USEPA, permittee shall conduct performance tests for SO2 and NOx, and furnish the District and the USEPA a written report of the results of such tests. The tests for SO2 and NOx shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 59. Performance tests for the emissions of SO2 and NOx shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources on the equipment named above. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for an observer to be present and to allow time for development of an approvable performance test plan. Such prior approval will minimize the possibility of USEPA rejection of test results for procedural deficiencies. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 60. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: E-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 61. ATC shall be implemented concurrently with or subsequent to ATC S-1128-18-31. [District Rule 2201]

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1128-19-24

EXPIRATION DATE: 02/28/2006

SECTION: 02 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#50-5 DIS #43006-81) WITH A NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR)

PERMIT UNIT REQUIREMENTS

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] 1.
- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity, [District Rule 4101] Federally Enforceable Through Title V Permit
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- Emissions from the steam generator shall not exceed any of the following limits: 0.006 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, or 0.011 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
- Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
- Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22]
- 10. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CHEVRON USA INC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY S-1128-18-24 : Apr 15 2010 128PM - RINALDIR

- 11. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 14. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 15. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 16. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

- 21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
- 24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 27. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 28. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 29. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 30. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 31. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

- 33. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated. [District NSR Rule] Federally Enforceable Through Title V Permit
- 34. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit
- 36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 37. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 38. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 39. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 40. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 41. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR 52, 60 and 61 and all other applicable Federal, State and local regulations. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 42. Permittee shall have installed a hydrocarbon vapor recovery system, having a collection efficiency of 85% on the following: (143) steam drive producing wells designated in this PSD permit, plus (16) existing steam drive producing wells located in Section 16, T30S, R22E, M.D.B. & M. This system shall be installed on existing wells prior to project start-up, and on new or modified wells before venting steam to the atmosphere. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 43. At such times as specified by the USEPA, permittee shall conduct performance tests for HC and furnish the District and the USEPA a written report of the results of such tests. The tests for HC shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 44. Performance tests shall be conducted for each vapor recovery system listed above in the Cymric and Taft areas. The USEPA shall be notified at least 30 days in advance of such test to allow an observer to be present. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 45. Permittee shall not discharge or cause the discharge of VOC into the atmosphere in excess of 50.6 lbs/day for each well in the system. [PSD SJ 77-32] Federally Enforceable Through Title V Permit

- 46. Permittee shall operate and maintain operable scrubbers on the equipment designated below: (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. Exhaust gases from the above units shall be ducted through operating scrubbers. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 47. Permittee shall not discharge into the atmosphere SO2 in excess of 0.145 lb/MMBtu (maximum 2-hour average) for the steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 48. Permittee shall operate, and maintain operable excess oxygen control equipment on the units designated below: (2) 22 MMBtu/hr steam generators to be located in Section 1, T11N, R24W; (5) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 31, T12N, R23W; (3) 50 MMBtu/hr steam generators and (1) 22 MMBtu/hr steam generator to be located in Section 25, T32S, R23E; and (1) 50 MMBtu/hr steam generator and (2) 22 MMBtu/hr steam generators to be located in Section 26, T32S, R23E. The concentration of excess oxygen in the exhaust gases shall not exceed 3% for the above units on a 24-hour average basis. The excess oxygen level shall be recorded continuously in a permanent record and shall be available for periodic inspection by the USEPA. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 49. Permittee shall not discharge into the atmosphere NOx in excess of 0.50 lb/MMBtu (maximum 2-hour average) for the 50 MMBtu/hr steam generators and 0.57 lb/MMBtu (maximum 2-hour average) for the 22 MMBtu/hr steam generators designated in the previous condition. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 50. At such times as specified by the USEPA, permittee shall conduct performance tests for SO2 and NOx, and furnish the District and the USEPA a written report of the results of such tests. The tests for SO2 and NOx shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 51. The performance tests shall be conduct for the equipment designated below: for SO2 the units designated in condition 60; for NOx the units designated in condition 62. Performance tests for the emissions of SO2 and NOx shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources on the equipment named above. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for an observer to be present and to allow time for development of an approvable performance test plan. Such prior approval will minimize the possibility of USEPA rejection of test results for procedural deficiencies. [PSD SJ 77-32] Federally Enforceable Through Title V Permit
- 52. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: E-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 77-32] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1128-36-22

EXPIRATION DATE: 02/28/2006

SECTION: 26 TOWNSHIP: 328 RANGE: 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA-FLAME GLE ULTRA-LOW NOX BURNER AND WITH SO2 SCRUBBER AND FLUE GAS

RECIRCULATION (CUSA ID #50-3-26C)

PERMIT UNIT REQUIREMENTS

- 1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
- 3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 4. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
- 5. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
- 6. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit
- 7. Scrubber liquor pH shall be maintained between 6 and 8 and shall be continuously monitored and recorded during operation of this unit. [District NSR Rule and District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 8. Scrubber mist eliminator shall be properly cleaned and maintained per the recommendations of the manufacturer.

 Each occurrence of the cleaning and maintenance shall be recorded. [District NSR Rule and District Rule 2520, 9.4.1]

 Federally Enforceable Through Title V Permit
- 9. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. The scrubber recirculation liquor liquid to gas ratio shall be recorded on a weekly basis. [District NSR Rule and District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 10. Testing for vapor recovery gas sulfur content shall be conducted no less than monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
- 11. Emissions from the steam generator shall not exceed any of the following limits: 0.324 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, or 0.003 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
- 12. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu. [District NSR Rule, and District Rules 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CHEVRON USA INC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY
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- 13. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District NSR Rule] Federally Enforceable Through Title V
- 14. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O2 or 0,036 lb-NOx/MMBtu, 0.324 lb-SOx/MMBtu, 0.037 lb-PM10/MMBtu, 51 ppmvd CO @ 3% O2 or 0.0375 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District NSR Rule and District Rules 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4351, 5.1] Federally Enforceable Through Title V Permit
- 15. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
- 16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6] and 4306, 5.3] Federally Enforceable Through Title V Permit
- 17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
- 18. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
- 19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District NSR Rule and District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 20. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit
- 21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1, 4306, 6.3.1, and 4351, 6.3.1] Federally Enforceable Through Title V Permit
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 23. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 24. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

- 25. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
- 27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5,4 and 4306, 5,4] Federally Enforceable Through Title V Permit
- 28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V **Permit**
- 29. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
- 30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
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- 33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
- 34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
- 35. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

Facility Name: CHEVRON USA INC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY 8-1128-38-22: Apr 15 2010 3-28PM - RINALDIR

- 36. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 37. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 38. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 39. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 40. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, 4306, 6.3.2, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
- 42. Permittee shall maintain daily records of volume of natural gas burned and vapor recovery system gas incinerated. [District NSR Rule] Federally Enforceable Through Title V Permit
- 43. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 44. Records of the scrubber liquor pH, occurrences of the cleaning and maintenance of the scrubber mist eliminator, and the scrubber liquid-to-gas ratio shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
- 45. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit
- 46. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 47. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: CHEVRON USA INC Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY 9-1128-36-32; Apr 15 2010 2399M - RINALDIR